Abstract

The present invention provides an underlayer film-forming material for copper, a method for forming the underlayer, an underlayer film for copper, and a semiconductor device including a substrate, the underlayer and copper wiring film, which enable the prevention of copper diffusion as well as provide superior adhesion to a copper wiring film, even if the film is thinner than conventional barrier metals. The underlayer film-forming material for copper includes a compound represented by a following general formula [I]: $(R_1R_2)P-(R)_n-Si(X_1X_2X_3)$, wherein at least one of X_1, X_2, and X_3 represents a hydrolysable group; each of R_1 and R_2 represents an alkyl group; R represents a divalent linear organic group which is formed of an alkylene group, an aromatic ring, or an alkylene group including an aromatic ring; and n represents an integer of 1 to 6.